



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,475	03/09/2004	Martin Debreczeny	TYHC:0147/FLE (P0397R)	3301
52144	7590	07/19/2006	EXAMINER	
FLETCHER YODER (TYCO INTERNATIONAL, LTD.) P.O. BOX 692289 HOUSTON, TX 77269-2289			LIN, JACK	
			ART UNIT	PAPER NUMBER
			3768	

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/797,475	DEBRECZENY ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Jack Lin	3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 3/9/2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____ .  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/25/05 &amp; 1/23/06</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____ .                                  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statements (IDS) submitted on July 25, 2005 and January 23, 2006 are acknowledged. The references listed therein have been considered.
2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

In particular, US Patent No. 4,714,341; 5,482,036; 4,911,167; and 5,64505 are listed in the specification and not the IDS

### ***Claim Rejections - 35 USC § 101***

3. Claims 1-13 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility.

Claim 1 specifies a method to measure a physiological parameter. However, Claim 1 does not result in a physical transformation nor does it appear to provide a useful, concrete and tangible result. Specifically, it does not appear to produce a tangible result because merely measuring a physiological parameter is nothing more than a computation within a processor. It fails to use or make available for use the result of the determination to enable its functionality

and usefulness to be realized. Additionally, the asserted practical application in the specification of the method to measure a physiological parameter is for displaying the result to the user. The practical application is not explicitly recited in the claims nor does it flow inherently therefrom.

Therefore, Claim 1 appears non-statutory.

Claims 2-13 further limit Claim 1 but also do not specifically or inherently produce tangible results from the method steps.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 8-16, and 20-24 rejected under 35 U.S.C. 102(b) as being anticipated by Diab et al. (US Patent 6,501,975 B2). Diab et al. discloses the same invention including a method and apparatus for measuring a physiological parameter. Diab et al. discloses a pulse oximeter comprising two light emitting diodes that emit light in the red and infrared wavelengths (column 27, lines 5-11), a photodetector (column 27, line 8), and a microprocessor (column 28, line 22). Diab et al. teaches that the two detected signals include a desired portion and an undesired portion (column 10, lines 3-9) caused by motion (column 10, line 13). Diab et al. further teaches that the microprocessor combines the two light signals (column 10, lines 14-17).

Regarding Claims 2, 4, and 16, Diab et al. discloses using light with a wavelength of 940 nm (column 30, line 1).

Regarding Claims 3 and 8, Diab et al. discloses using light with a wavelength of 650 nm (column 29, line 66).

Regarding Claims 9, 10, and 20, Diab et al. discloses applying a multiplier to one measured signal and subtracting that signal from the other measured signal (column 10, lines 14-17) where the multiplier is a function of the desired signal portion (column 10, lines 18-19), which for a pulse oximeter is the absorption of hemoglobin (column 26, lines 53-54 and column 29, lines 43-46).

Regarding Claims 11 and 24, Diab et al. discloses one physiological measurement is heart rate (column 1, lines 61-62).

Regarding Claims 12 and 22, Diab et al. discloses using a third LED (column 28, line 66 and figure 10) to measure a third signal (column 29, line 1) and processing the signal along with the first two signals (column 24, lines 32-47).

Regarding Claims 13 and 23, Diab et al. discloses estimating the saturation of oxygenated blood (column 26, lines 53-54) using the signal from the third wavelength (column 24, line 22).

6. Claims 1-6, 8, 11-18, 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Pologe (US Patent 5,297,548). Pologe discloses the same invention including a method and apparatus for non-invasive photoplethysmographic measurement of blood analytes. Pologe discloses a pulse oximeter system (column 1, line 26) comprising a plurality of light emitting devices (column 4, lines 5-6), at least one corresponding light detector (column 4, lines 6-7), and a data processing circuit (column 6, line 19). Pologe teaches that the data received by the probe can include a noise component caused by motion (column 5, lines 29-32). Pologe further teaches

that the data processing circuit computes a ratio of two light signals (column 6, lines 54-59 and figure 4, reference 404).

Regarding Claims 2, 4-6, and 16-18, Pologe discloses using light with a wavelength of 1270 nm (column 4, line 29) which is viewed as approximately 1250 nm.

Regarding Claims 3 and 8, Pologe discloses using light with a wavelength of 810 nm (column 4, line 31).

Regarding Claims 11 and 24, Pologe discloses calculating the heart rate (figure 1).

Regarding Claims 12 and 22, Pologe discloses a system using light of three different wavelengths (column 9, lines 23-24) and processing the signals from the three wavelengths (column 10, line 24 – column 11, line 45).

Regarding Claims 13 and 23, Pologe discloses estimating the saturation of oxygenated blood (figure 5, reference 505) using the signals from the three wavelengths (figure 5, references 502-504).

#### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pologe as applied to claims 1 and 14 above, and further in view of Jöbsis (US Patent 4,805,623). Pologe discloses the invention substantially as claimed with the exception of using a wavelength of

approximately 1185 nm. However, Pologe teaches any three wavelengths may be used (column 9, lines 29-31) if they meet the criteria where water is transparent at one wavelength (such as 810 nm) and detected at the other wavelength (such as 1270 nm) (column 4, lines 30-32). Jöbsis discloses the absorbance curve for water where water experiences three peak absorbance at 980 nm, 1200 nm, and 1400 nm (figure 6). The absorbance at 1200 nm meets the criteria as specified by Pologe and is viewed as approximately 1185 nm. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have modified the method and apparatus of Pologe by using light with a 1200 nm wavelength as taught by Jöbsis since it has generally been held to be within the skill level of the art to implement a method and apparatus with alternate equivalent expedients.

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Larsen et al. (US Patent Application Publication 2001/0005773 A1) discloses an oximeter that uses three wavelengths to filter out noise. Shemwell (International Application WO 97/49330) discloses a motion artifact resistant oximeter that uses three wavelength.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack Lin whose telephone number is (571) 272-7694. The examiner can normally be reached on Monday-Friday, 8:00 a.m. - 4:30 p.m. EST.

Art Unit: 3768

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni Mantis-Mercader can be reached on (571) 272-4740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JL  
Art Unit 3768

ERIC F. WINAKUR  
PRIMARY EXAMINER

